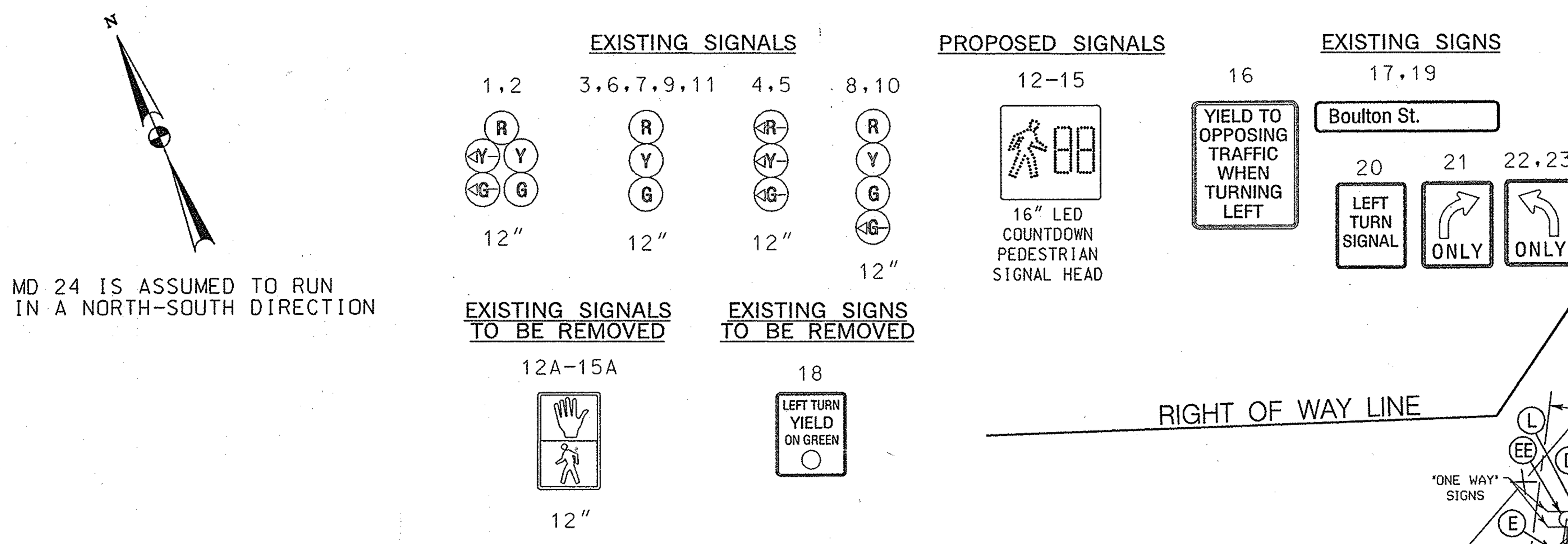
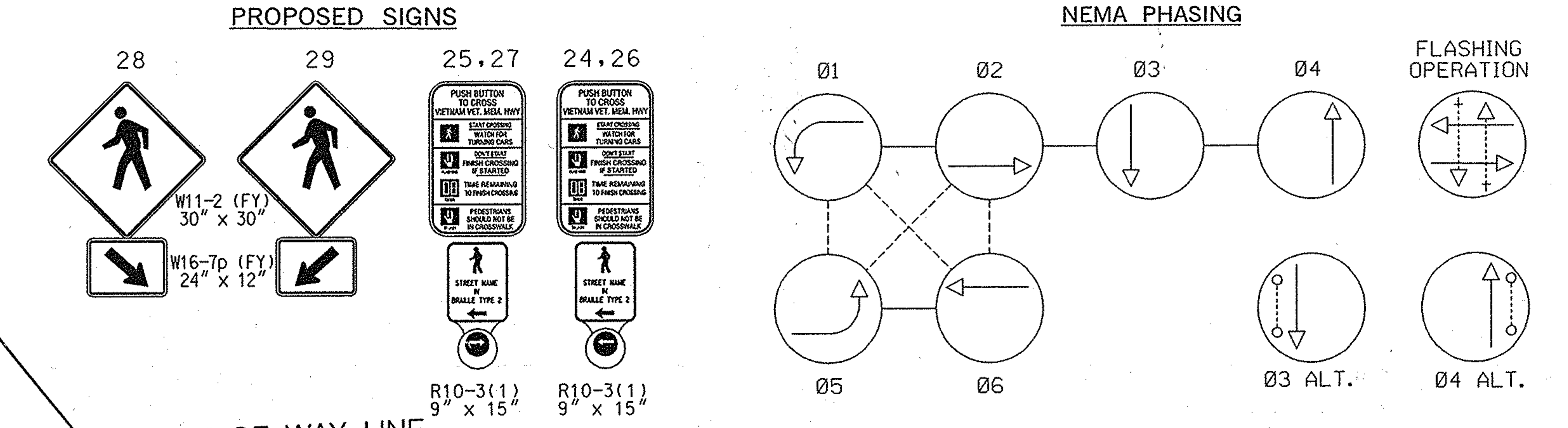
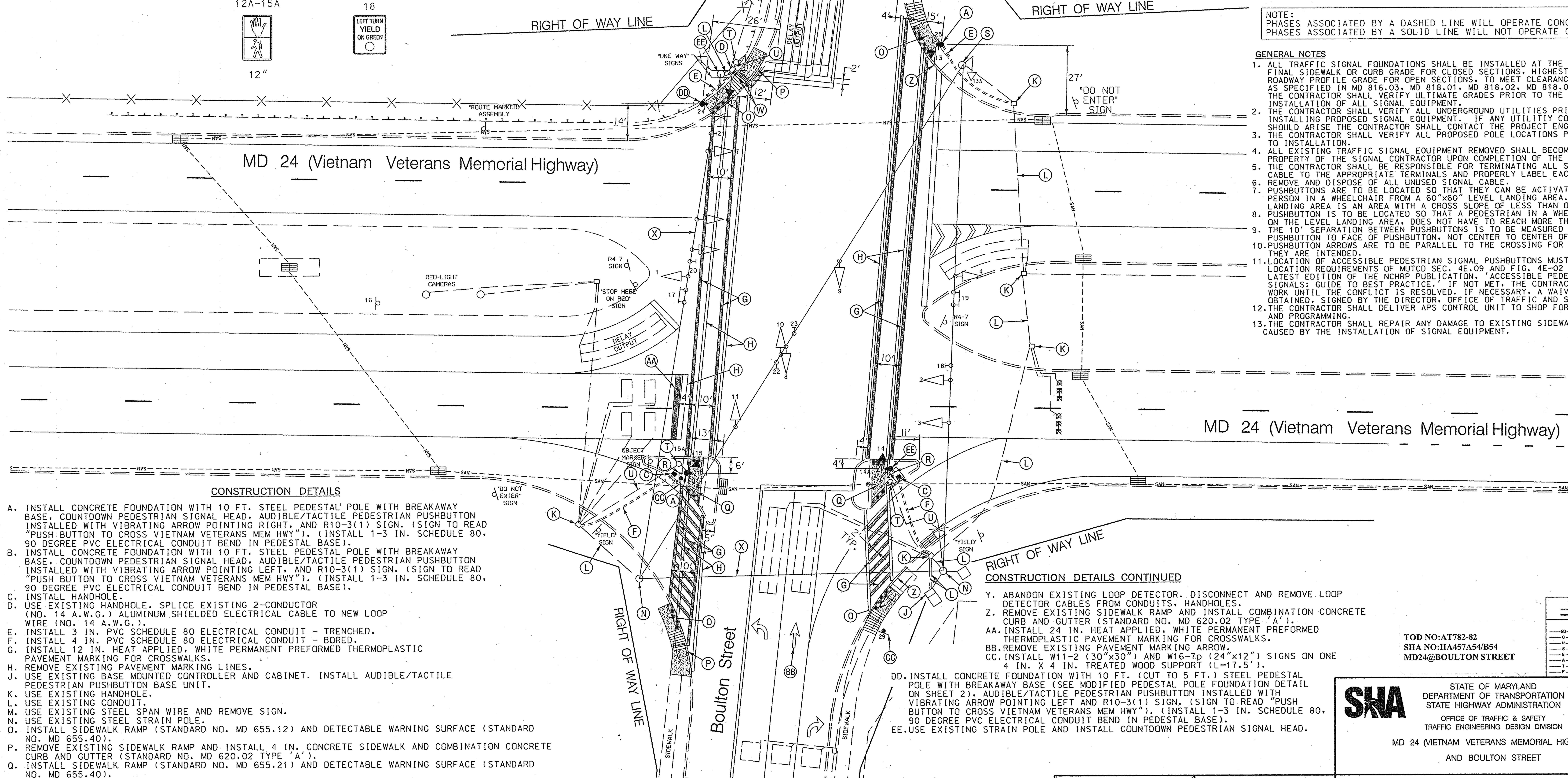




NOTE:
PHASES ASSOCIATED BY A DASHED LINE WILL OPERATE CONCURRENTLY.
PHASES ASSOCIATED BY A SOLID LINE WILL NOT OPERATE CONCURRENTLY.



GENERAL NOTES

1. ALL TRAFFIC SIGNAL FOUNDATIONS SHALL BE INSTALLED AT THE FINAL SIDEWALK OR CURB GRADE FOR CLOSED SECTIONS, HIGHEST ROADWAY PROFILE GRADE FOR OPEN SECTIONS, TO MEET CLEARANCES AS SPECIFIED IN MD 816.03, MD 818.01, MD 818.02, MD 818.04. THE CONTRACTOR SHALL VERIFY ULTIMATE GRADES PRIOR TO THE INSTALLATION OF ALL SIGNAL EQUIPMENT.
2. THE CONTRACTOR SHALL VERIFY ALL UNDERGROUND UTILITIES PRIOR TO INSTALLING PROPOSED SIGNAL EQUIPMENT. IF ANY UTILITIY CONFLICTS SHOULD ARISE THE CONTRACTOR SHALL CONTACT THE PROJECT ENGINEER.
3. THE CONTRACTOR SHALL VERIFY ALL PROPOSED POLE LOCATIONS PRIOR TO INSTALLATION.
4. ALL EXISTING TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE SIGNAL CONTRACTOR UPON COMPLETION OF THE NEW SIGNAL.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TERMINATING ALL SIGNAL CABLE TO THE APPROPRIATE TERMINALS AND PROPERLY LABEL EACH CABLE.
6. REMOVE AND DISPOSE OF ALL UNUSED SIGNAL CABLE.
7. PUSHBUTTONS ARE TO BE LOCATED SO THAT THEY CAN BE ACTIVATED BY A PERSON IN A WHEELCHAIR FROM A 60"x60" LEVEL LANDING AREA. A LEVEL LANDING AREA IS AN AREA WITH A CROSS SLOPE OF LESS THAN OR EQUAL TO 2%.
8. PUSHBUTTON IS TO BE LOCATED SO THAT A PEDESTRIAN IN A WHEELCHAIR LOCATED ON THE LEVEL LANDING AREA, DOES NOT HAVE TO REACH MORE THAN 18 IN.
9. THE 10' SEPARATION BETWEEN PUSHBUTTONS IS TO BE MEASURED FROM FACE OF PUSHBUTTON TO FACE OF PUSHBUTTON, NOT CENTER TO CENTER OF POLE.
10. PUSHBUTTON ARROWS ARE TO BE PARALLEL TO THE CROSSING FOR WHICH THEY ARE INTENDED.
11. LOCATION OF ACCESSIBLE PEDESTRIAN SIGNAL PUSHBUTTONS MUST MEET LOCATION REQUIREMENTS OF MUTCD SEC. 4E.09 AND FIG. 4E-02 AND THE LATEST EDITION OF THE NCHRP PUBLICATION, 'ACCESSIBLE PEDESTRIAN SIGNALS: GUIDE TO BEST PRACTICE.' IF NOT MET, THE CONTRACTOR IS TO STOP WORK UNTIL THE CONFLICT IS RESOLVED. IF NECESSARY, A WAIVER SHALL BE OBTAINED, SIGNED BY THE DIRECTOR, OFFICE OF TRAFFIC AND SAFETY.
12. THE CONTRACTOR SHALL DELIVER APS CONTROL UNIT TO SHOP FOR TESTING AND PROGRAMMING.
13. THE CONTRACTOR SHALL REPAIR ANY DAMAGE TO EXISTING SIDEWALKS CAUSED BY THE INSTALLATION OF SIGNAL EQUIPMENT.

CONSTRUCTION DETAILS

A. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL' POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING RIGHT, AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS VIETNAM VETERANS MEM HWY"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
B. INSTALL CONCRETE FOUNDATION WITH 10 FT. STEEL PEDESTAL POLE WITH BREAKAWAY BASE, COUNTDOWN PEDESTRIAN SIGNAL HEAD, AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT, AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS VIETNAM VETERANS MEM HWY"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
C. INSTALL HANDHOLE.
D. USE EXISTING HANDHOLE. SPLICE EXISTING 2-CONDUCTOR (NO. 14 A.W.G.) ALUMINUM SHIELDED ELECTRICAL CABLE TO NEW LOOP WIRE (NO. 14 A.W.G.).
E. INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED.
F. INSTALL 4 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - BORED.
G. INSTALL 12 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
H. REMOVE EXISTING PAVEMENT MARKING LINES.
J. USE EXISTING BASE MOUNTED CONTROLLER AND CABINET. INSTALL AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON BASE UNIT.
K. USE EXISTING HANDHOLE.
L. USE EXISTING CONDUIT.
M. USE EXISTING STEEL SPAN WIRE AND REMOVE SIGN.
N. USE EXISTING STEEL STRAIN POLE.
O. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.12) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
P. REMOVE EXISTING SIDEWALK RAMP AND INSTALL 4 IN. CONCRETE SIDEWALK AND COMBINATION CONCRETE CURB AND GUTTER (STANDARD NO. MD 620.02 TYPE 'A').
Q. INSTALL SIDEWALK RAMP (STANDARD NO. MD 655.21) AND DETECTABLE WARNING SURFACE (STANDARD NO. MD 655.40).
R. REMOVE EXISTING SIDEWALK AND INSTALL 3 IN. PVC SCHEDULE 80 ELECTRICAL CONDUIT - TRENCHED. REPLACE 4 INCH CONCRETE SIDEWALK.
S. USE EXISTING STRAIN POLE. REMOVE EXISTING PEDESTRIAN SIGNAL HEAD, PUSHBUTTON AND R10-4(1) SIGN AND INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEAD. CLEAN EXISTING DRILLED HOLE WITH BRUSH AND SPRAY COLD GALVANIZING COMPOUND ON THE AFFECTED AREA.
T. REMOVE EXISTING PEDESTAL POLE PEDESTRIAN SIGNAL HEAD, AND R10-4(1) SIGN. REMOVE FOUNDATION 12 IN. BELOW GRADE AND BACKFILL.
U. CAP AND ABANDON EXISTING CONDUIT.
V. INSTALL 6 FT. x 30 FT. (3-6-3 WINDING) QUADRUPOLE TYPE LOOP DETECTOR ENCASED IN 1/4 IN. FLEXIBLE TUBING.
W. INSTALL 1 IN. GALVANIZED ELECTRICAL CONDUIT. (FOR DETECTOR WIRE SLEEVE).
X. USE EXISTING STEEL SPAN WIRE.

CONSTRUCTION DETAILS CONTINUED

Y. ABANDON EXISTING LOOP DETECTOR. DISCONNECT AND REMOVE LOOP DETECTOR CABLES FROM CONDUITS, HANDHOLES.
Z. REMOVE EXISTING SIDEWALK RAMP AND INSTALL COMBINATION CONCRETE CURB AND GUTTER (STANDARD NO. MD 620.02 TYPE 'A').
AA. INSTALL 24 IN. HEAT APPLIED, WHITE PERMANENT PREFORMED THERMOPLASTIC PAVEMENT MARKING FOR CROSSWALKS.
BB. REMOVE EXISTING PAVEMENT MARKING ARROW.
CC. INSTALL W11-2 (30"x30") AND W16-7p (24"x12") SIGNS ON ONE 4 IN. X 4 IN. TREATED WOOD SUPPORT (L=17.5').
DD. INSTALL CONCRETE FOUNDATION WITH 10 FT. (CUT TO 5 FT.) STEEL PEDESTAL POLE WITH BREAKAWAY BASE (SEE MODIFIED PEDESTAL POLE FOUNDATION DETAIL ON SHEET 2). AUDIBLE/TACTILE PEDESTRIAN PUSHBUTTON INSTALLED WITH VIBRATING ARROW POINTING LEFT AND R10-3(1) SIGN. (SIGN TO READ "PUSH BUTTON TO CROSS VIETNAM VETERANS MEM HWY"). (INSTALL 1-3 IN. SCHEDULE 80, 90 DEGREE PVC ELECTRICAL CONDUIT BEND IN PEDESTAL BASE).
EE. USE EXISTING STRAIN POLE AND INSTALL COUNTDOWN PEDESTRIAN SIGNAL HEAD.

TOD NO:AT782-82
SHA NO:HA457A54/B54
MD24@BOULTON STREET

GEOMETRIC LEGEND
EXISTING
PROPOSED

UTILITY LEGEND
SD — STORM DRAIN
G — GAS MAIN
W — WATER MAIN
S — SEWER MAIN
E — ELECTRIC CABLES
A — AERIAL CABLES
T — TELEPHONE CABLES
F — FIBER-OPTIC

Whitman, Requardt and Associates, LLP
Engineers, Architects and Planners
801 South Caroline Street
Baltimore, Maryland 21231
410-235-3450

STATE OF MARYLAND
DEPARTMENT OF TRANSPORTATION
STATE HIGHWAY ADMINISTRATION
OFFICE OF TRAFFIC & SAFETY
TRAFFIC ENGINEERING DESIGN DIVISION

MD 24 (VIETNAM VETERANS MEMORIAL HIGHWAY)
AND BOULTON STREET

SIGNALIZATION PLAN

APPROVALS	REVISIONS
TEAM LEADER	(D) INSTALL COUNDOWN AND AUDIBLE PEDESTRIAN SIGNALS TIMS # I366 CONTRACT NO. AT7825185 01.11.2008
ASST. DIV. CHIEF	BRD NML
DIVISION CHIEF	(B) AS BUILT FOR RED LIGHT CAMERA INSTALLATION 6/5/00
OFFICE DIRECTOR	RRZ
ORIGINAL ON FILE	[A] E/P LT & ALT PEDS 6/88
	DMP

SCALE 1" = 20' DATE 10-28-87 CONTRACT NO. AT7825185

DESIGNED BY	S. THACKER	COUNTY	HARFORD
DRAWN BY		LOGMILE	12002409.33
CHECKED BY	D.DODA	TIMS NO.	I366
FAP NO.	SEE TITLE SHEET	TOD NO.	

TS NO. 2386 D DRAWING TSP-1 OF 2 SHEET NO. 1 OF 2

PLOTTED: 01-14-2008
FILE: n:\31556-132\cadd\pSG-P001_I366.dgn

BY: sbloss